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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
		1875.808000	
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	09/813,420	March 20, 2001	
	First Named Inventor		
	Stephen ALLOTT		
	Art Unit	Examiner	
	2617	Sam Bhattacharya	
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>36,013</u></p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below".</p>			



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☒ *Total of one (1) forms are submitted.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

ALLOTT *et al.*

Appl. No.: 09/813,420

Filed: March 20, 2001

For: **DC Offset Correction for Use in a
Direct-Conversion Radio
Architecture**

Confirmation No.: 2396

Art Unit: 2617

Examiner: Sam Bhattacharya

Atty. Docket No.: 1875.8080000

Arguments to Accompany the Pre-Appeal Brief Request for Review

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Mail Stop: AF

Sir:

Applicants hereby submit the following Arguments, in five (5) or less total pages, as attachment to the Pre-Appeal Brief Request for Review Form (PTO/SB/33). A Notice of Appeal is concurrently filed.

Arguments

Applicants' arguments in the Reply under 37 C.F.R. § 1.111, filed on August 21, 2006, in response to the Office Action mailed on May 19, 2006, were not properly considered or responded to by the Examiner in the subsequent Final Office Action mailed on November 16, 2006 ("Office Action"). In particular, the Office Action was legally and factually deficient because it failed to adequately show that any of the cited references, alone or in combination with one another, teach or suggest all of the features recited in the claims.

1. Status of the Claims

Claims 2-10 are pending in this application, with claims 2, 5, and 7-10 being the independent. Claim 7 is presently allowed.

2. *Overview of the Invention*

As described in the Specification, when a received signal is down-converted to around zero frequency, extraneous DC offset may become intermingled with the received signal and even impede reception if the DC offset is amplified to levels that saturate subsequent stages of the receiver. It is necessary therefore to remove DC offset prior to down-conversion. The present invention provides a novel technique for correcting for DC offset in a received signal. Among other features, this technique includes inferring from a determined delay in the receiver chain the DC offset components in a received signal and performing DC offset correction. These features of the invention are described in detail in pages 6-8 of the Specification. Independent claims 2 and 5 are directed to radio receiver architectures that recite a DC offset correction feature. Independent claims 8 and 10 are directed to methods for implementing a DC offset correction technique in a dual mixer stage radio receiver. Independent claim 9 is directed to a related method for maintaining the in-phase and quadrature phase components of a signal within set thresholds.

3. *Summary of Rejections*

In the Final Office Action mailed on November 16, 2006, the Examiner rejected claims 2-4 under 35 U.S.C. 103(a) as being unpatentable over Luz *et al.* (U.S. Patent 6,321,073) in view of Nielsen (U.S. Patent 6,985,518); claims 5-6 under 35 U.S.C. 103(a) as being unpatentable over Luz in view of Nielsen and Galal *et al.* (U.S. Patent 6,161,004); and claims 8 and 10 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0114413 to Zarubinsky *et al.* in view of Nielsen and Galal. Common to these rejections is the Examiner's assertion that "Nielsen discloses

delay measurement means 32 coupled to the demodulator 36 operable to determine delay vectors." However, as will be shown below, this assertion is factually deficient and therefore the rejection of claims 2-4, 5-6, 8 and 10 is improper.

The Examiner also rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Zarubinsky in view of Ma et al. (U.S. Patent 4,816,769).

4. Nielsen Does Not Teach or Suggest Determining a Delay Vector that Characterizes the DC Components of a Received Signal

Independent claim 2 recites, among other features, a "delay measurement means coupled to the demodulator operable to determine a delay vector characterizing the in-phase and quadrature phase DC components." Independent claim 5 also recites a "delay measurement means". Independent claims 8 and 10 both recite "determining a signal delay . . . characterizing in-phase and quadrature phase components of the DC offset."

In the rejection of claims 2 and 5, the Examiner concedes that Luz does not teach or suggest the "delay measurement means" feature of claims 2 and 5. Similarly, in the rejection of independent claims 8 and 10, the Examiner concedes that Zarubinsky does not teach or suggest the above recited feature of claims 8 and 10. However, the Examiner relies on Nielsen as allegedly teaching the above recited features by asserting that "Nielsen discloses delay measurement means 32 coupled to the demodulator 36 operable to determine delay vectors." In particular, the Examiner refers to FIG. 2 and col. 4, lines 7-45 of Nielsen to support this assertion. Applicants have carefully examined Nielsen, but, for the reasons set forth herein, disagree with the Examiner's assertion.

Nielsen is directed to an adaptive generalized matched filter rake receiver. The delay vector \vec{d} discussed in Nielsen refers to a vector of delay values, where each delay value denotes a propagation delay associated with one of several propagation paths of a wirelessly transmitted signal (Nielsen, col. 3, lines 25-63) due to multipath propagation. As such, the delay vector in Nielsen is not measurable inside of the receiver chain nor is it characterizing of DC components of the received signal. Accordingly, the delay vector \vec{d} of Nielsen is substantially different and of no relevance to the delay or delay vector recited in claims 2, 5, 8 and 10. The Examiner's assertion of the teaching by Nielsen is therefore factually deficient and the rejection of claims 2-4, 5-6, 8 and 10 is improper.

5. *Zarubinsky and Ma Do Not Teach or Suggest Each and Every Feature of Independent Claim 9*

In the rejection of claim 9, the Examiner alleges that Zarubinsky teaches a method that includes "setting the gain of an automatic gain control, increasing the gain of the automatic gain control stage by a predetermined amount and repeating these steps until the signal levels of the in-phase and quadrature phase components are greater than or equal to the predetermined minimum threshold value." In support of this assertion, the Examiner refers to col. 1, pars. [0028], [0030], [0031] and col. 2, pars. [0089] to [0092] of Zarubinsky. Applicants have carefully examined these sections of Zarubinsky but found no reference to or suggestion of the teachings alleged by the Examiner. Further, Ma does not overcome the deficiencies of Zarubinsky with respect to the above features. Accordingly, Zarubinsky and Ma, alone or in combination, do not teach or suggest each and every feature of independent claim 9. The rejection of claim 9 should therefore be withdrawn.

Conclusion

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) of claims 2-6 and 8-10.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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